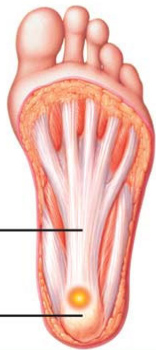


## Plantar Fasciitis



The plantar fascia is a thick expanse of connective tissue that reinforces the underside, or longitudinal arch of the foot.

This tissue helps to provide rigidity to the foot as it propels the weight of the human body during gait. As well, the plantar fascia helps to provide shock absorption, by dissipating force when the foot strikes the ground during walking and running.

However, biomechanical dysfunction, repetitive strain and improper footwear can cause this tissue to become inflamed – the condition known as plantar fasciitis

Individuals who are experiencing plantar fasciitis may describe:

- Heel pain
- Arch pain
- "Burning" in the arch of their foot
- Increased symptoms in the morning, upon rising from bed
- Increased symptoms after prolonged periods of sitting or resting
- Pain after physical activity
- Swelling in the area of the heel

The plantar fascia may become overused and inflamed in individuals with insufficient strength in the intrinsic muscles of the foot as well as the extrinsic muscles controlling pronation – tibialis anterior and posterior. The resulting excessive mobility of the hindfoot and midfoot is commonly termed "overpronation".

Conversely, a loss of mobility in the hindfoot region – at the talocrural and subtalar joints – results in a compensatory increase in motion at the mid and forefoot. This attenuates the plantar fascia during gait, also giving rise to overuse and inflammation.

These two very different scenarios can give rise to the same symptoms of plantar pain. However, effective treatment approaches for these situations are quite different. Treatment of the first condition necessitates increased support for the foot and ankle via optimal footwear, orthoses and improved muscular strength. Whereas proper care in the second situation requires increased mobility in the articular and soft tissue structures of the hindfoot, but not necessarily the use of orthoses.

Furthermore, overpronation can also occur due to biomechanical faults elsewhere in the lower kinetic chain - typically, increased tibial and femoral torsion. These biomechanical faults are the result of strength loss in the external rotators of the hip and pelvic girdle, and also produce an altered gait pattern.

A physiotherapist specializing in the assessment and treatment of foot disorders has participated in post-graduate training to understand the biomechanics of the foot and ankle region as well as its relationship with the lower kinetic chain. A detailed assessment of the foot and ankle complex allows the client and practitioner to select the optimal treatment option for their condition. In conjunction with exercise to correct biomechanical faults in the lower quadrant, an especially useful component of the physiotherapy intervention is the use of supportive taping of the midfoot and/or hindfoot. This allows therapist and client to evaluate the need for and effectiveness of orthoses – before the client makes this purchase.

In addition to supportive taping, the research literature supports the use of physiotherapy interventions such as:

- Impairment based manual therapy and exercise to improve articular mobility at the foot and ankle
- Stretching or splinting to improve soft tissue flexibility
- Risk factor modification including exercise for weight management and advice on footwear

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**For further information about physiotherapy treatment for foot pain or to book an appointment please contact:**

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